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Annual Report

FOR THE FISCAL YEAR ENDED

DECEMBER 31, 1956

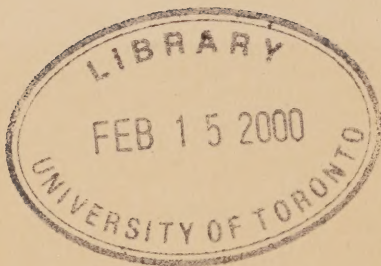
The St. Lawrence Seaway Authority



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ANNUAL REPORT

FOR THE FISCAL YEAR ENDED

DECEMBER 31, 1956



THE ST. LAWRENCE SEAWAY AUTHORITY



THE ST. LAWRENCE SEAWAY AUTHORITY

March 29, 1957.

The Honourable George Marler,
Minister of Transport,
Ottawa, Ontario.

Dear Sir :

I beg to submit herewith the report of The St. Lawrence Seaway Authority for the period from January 1, 1956, to December 31, 1956, as required under Section 85, Subsection (3) of the Financial Administration Act, Chapter 116, R.S.C. 1952.

Respectfully submitted,

LIONEL CHEVRIER

THE ST. LAWRENCE SEAWAY AUTHORITY

THE HONOURABLE LIONEL CHEVRIER, Q.C., P.C.,
President

CHARLES GAVSIE, Q.C.,
Vice-President

C. W. WEST, P.Eng.,
Member

Executive Officers

RAYMOND J. BERIAULT *Secretary*

A. G. MURPHY *Chief Engineer*

D. W. G. OLIVER *Comptroller*

P. E. R. MALCOLM *Director of Administration*

LUC COUTURE *Counsel*

THE ST. LAWRENCE SEAWAY AUTHORITY

ANNUAL REPORT 1956

The St. Lawrence Seaway Authority was established by Act of Parliament, 1951 (2nd Session), C. 24. This Act was proclaimed and the appointment of its members made public on July 1, 1954.

The Authority is incorporated for the purposes of :

- (a) acquiring lands for and constructing, maintaining and operating all such works as may be necessary to provide and maintain, either wholly in Canada or in conjunction with works undertaken by an appropriate authority in the United States, a deep waterway between the Port of Montreal and Lake Erie;
- (b) constructing, maintaining and operating all such works in connection with such a deep waterway as the Governor in Council may deem necessary to fulfill any obligation undertaken or to be undertaken by Canada pursuant to any present or future agreement.

For the above purposes, the Authority has the capacities and powers of a natural person as if it were a corporation incorporated by Letters Patent under the Great Seal of Canada. Its powers are exercised only as a Federal Government Agency concerned with the construction and management of the St. Lawrence Seaway from the Port of Montreal to Lake Erie.

During 1956, progress has continued in the five following main fields of endeavour :

- the preparation and issuance of design plans and specifications for all works required to complete the Seaway;
- the supervision and inspection of contracts in operation;
- the continuation of field surveys, including basic surveys, subsurface investigations, metering of river flow, sounding of lakes and river channels, the establishment and acquisition of right of way;
- the construction and testing of lock and river models;
- close cooperation with interested groups and public utilities, particularly with reference to remedial works, improvements, railway and highway relocations, necessitated by Seaway construction in the Laprairie, Soulanges and International Rapids Sections.

During the course of 1956, the members of The St. Lawrence Seaway Authority and of its United States counterpart, the Saint Lawrence Seaway Development Corporation, met from time to time at Ottawa and Washington to discuss matters of common interest including tolls. Among such matters discussed were the prospective construction schedules, data on engineering and administrative questions, progress and coordination of the work in the various sections of the Seaway. The meetings also dealt with the character and volume of future Seaway traffic, the various considerations that enter into the determination of the rate base for tolls and the assessment and collection of tolls.

Of particular interest to both entities is the decision to build a high level suspension bridge over the South Channel of the St. Lawrence River between Cornwall Island and the United States mainland. This new bridge will replace the existing South Channel Bridge which has been used for



ST. LAWRENCE SEAWAY AUTHORITY PHOTO

Construction of the St. Lambert Lock, near the South end of Victoria Bridge, proceeds as monolith after monolith takes form. Thirty-two of these enormous cubes of concrete will be built on each side to form the chamber of the lock, which will be enclosed at each end by gates. We are looking generally upstream. The lift of this, the first lock of the Seaway from seaward, will be 15 feet. The St. Lawrence Seaway Authority is building four more locks, and the United States entity, two, for the seven new locks required. The building in background is the concrete batching plant, to supply fresh concrete to be placed in forms to build the lock monoliths. It comes to the forms by conveyor belt, here. Some 800,000 tons of concrete will be required for this lock alone.

both highway and railway traffic from Cornwall Island to the United States. This bridge must be removed to allow ships to pass through the canal and locks in the United States in the International Rapids Section. The decision was taken by The St. Lawrence Seaway Authority following legislation voted by Parliament to authorize the Authority to participate in the construction of this international bridge.

STATUS OF THE PROJECT AS OF DECEMBER 31, 1956

As of December 31, 1956, a total of 80 contracts have been awarded by The St. Lawrence Seaway Authority. The contracts for the construction of permanent facilities required for the Seaway project were awarded after calling for tenders by public advertisement. These 80 contracts are valued at \$190,000,000. The work completed under these contracts stands at approximately 35 per cent of the total value of contracts awarded.

The progress on major construction projects may be described as follows :

LACHINE SECTION

Excavation

(1) At a point downstream from the Jacques Cartier Bridge, at the entrance to the future channel the contractor is engaged on a contract some 4,900 feet in length to excavate 2,000,000 cubic yards of material, of which 500,000 cubic yards are rock. The contract is valued at \$1,768,900. Awarded June 15, 1955, it is to be completed November 30, 1957.

This contract is 75 per cent completed. Cofferdamming is completed and dyke construction has progressed according to schedule.

(2) Progress is notable from Jacques Cartier Bridge towards Victoria Bridge. This is the location of The St. Lawrence Seaway Authority Contract No. 1, awarded on October 25, 1954.

This contract is for excavation of some 7,600 lineal feet of the Seaway channel and construction of the dyke and is to be completed by June 30, 1957. The entire contract area is about six per cent ahead of schedule. The total estimated cubic yardage to be excavated is some 3,000,000 cubic yards of which 97 per cent has been completed. Dykes are also completed. This contract will be completed some five months before the completion date called for in the specifications.

(3) Early in the new year, the contractor started work for the construction of St. Lambert Lock and approaches at Victoria Bridge. This will be the most easterly lock of the Seaway and is to be built at the South Shore end of the bridge. It is one of five which The St. Lawrence Seaway Authority is to build. Seven locks in all will be constructed for the Seaway, of which two will be built by the Saint Lawrence Seaway Development Corporation in the International Section.

This contract includes the construction of the lock and excavation extending some 5,000 feet and will require the removal of some 2,400,000 cubic yards of material. The contractor has now completed 26 per cent of the work.

(4) Upstream from this lock, some seven miles of excavation of channel and construction of dyke in the Laprairie Basin stretching around to the site of the future Cote Ste. Catherine Lock is in progress.



COTE STE. CATHERINE LOCK UNDER CONSTRUCTION — The lift of this lock will be 30 ft. and will enable ships to travel from the canal in the Laprairie Basin to the overland canal connecting the Côte Ste. Catherine Lock with the channel in Lake St. Louis. This lock is being built to bypass the Lachine Rapids.

(a) The most easterly of the two lengthy channel and dyke contracts here is valued at \$4,213,800 and calls for the excavation of 20,000 lineal feet of channel and construction of the requisite dyke. It also includes the construction of a turning basin for ships and the extension of the water intake for the City of St. Lambert. Excavation required will be some 2,000,000 cubic yards of rock and nearly 5,000,000 cubic yards of common excavation. It is to be completed by December 15, 1957.

On this contract cofferdams have been completed and work on the impervious section of the dyke has been carried through the whole year. Work has reached the 72 per cent mark.

(b) Adjoining this contract on the West and South is one of 15,500 feet in length. It involves excavation of some 1,200,000 cubic yards of rock and some 2,500,000 cubic yards of common material and is to be completed by August 31, 1958.

The contractor has completed the cofferdamming. Some 1,002,000 cubic yards of common excavation and 745,000 cubic yards of rock excavation have been removed from the channel. Work has been completed on the installation of a temporary water intake to serve the Town of Laprairie, in accordance with terms of the contract. This contract is 52 per cent complete.

(5) Adjoining this contract is that for construction of Cote Ste. Catherine Lock and Approaches. This and the St. Lambert Lock are the two to be built in the Lachine Section of the Seaway. Awarded August 26, 1955 this contract is valued at \$7,107,480 and is to be completed by July 31, 1958.

The work extends a distance of 10,500 lineal feet and in addition to construction of the lock consists of excavation of a navigation channel and the construction of dykes which form the approaches to the lock. It also includes the excavation of a turning basin downstream from the lock, the construction of regulating works for the control of the water level of the upper reach of the canal and the formation of a reservoir pool upstream from the lock.

Common excavation required by this contract will amount to some 2,800,000 cubic yards, rock excavation to some 1,653,500 yards.

Approximately 1,538,000 cubic yards of common excavation have been removed so far and rock excavation amounted to 1,070,000 cubic yards.

The pouring of concrete in the future lock walls started on July 1, 1956, as scheduled. As of December 31, 1956, nearly half the concrete had been poured. Taken as a whole, this contract is now 47 per cent complete.

(6) A contract extending approximately 5,000 lineal feet was awarded for excavation proceeding along the South Shore from the westerly limits of the Cote Ste. Catherine Lock contract upstream in the direction of the Indian Reserve of Caughnawaga. This contract scheduled for completion on October 30, 1956 was completed eight months ahead of time.

(7) Proceeding in a westerly direction further overland to a point immediately east of the Honore Mercier Bridge, another contract for excavation awarded in December 1955 progressed during 1956. This excavation is 14,000 feet in extent and involves 19,000 lineal feet of dyke. It includes 4,600,000 cubic yards of common excavation of which 2,000,000



Excavation taking place in Beauharnois where the future Lower Beauharnois Lock will be located. This lock, as well as the Upper one, will have a lift of 42 ft. These two locks will take ships from Lake St. Louis into the Beauharnois Power Canal, already excavated to the required 27 ft depth.

cubic yards have been completed and 2,900,000 cubic yards of rock excavation of which 800,000 cubic yards have been completed. Valued at \$4,877,700 this contract is scheduled for completion on September 30, 1958.

(8) Another excavation contract, including embankments and the C.P.R. Bridge sub-structure, was awarded in the early fall of 1956. Valued at \$3,327,725, it is scheduled for completion on November 30, 1958. As of December 31, 1956, the contractor has completed 12 per cent of the work.

(9) The last excavation contract in the Lachine Section is located entirely in the Caughnawaga Indian Reserve. It involves 11,500 lineal feet of excavation and the construction of a dyke extending some 5,000 feet into Lake St. Louis. The excavation is to be made in three stages. As of December 31, 1956, the work was 54 per cent complete. This contract is valued at \$5,843,750 and is to be completed by September 30, 1958.

Dredging

(1) A contract was awarded in May 1956 for dredging the approach to the Seaway channel from the Montreal Harbour. Valued at \$10,636,000 this contract is scheduled for completion on August 31, 1958. At the end of the year, the contractor had completed 21 per cent of the work.

(2) For dredging the Seaway Channel in Lake St. Louis, a contract valued at \$8,219,000, was awarded March 23, 1955, for removal of 3,800,000 cubic yards of overburden and 100,000 cubic yards of solid rock.

As of December 31, 1956, a total of 2,948,461 cubic yards of overburden had been dredged. Scheduled for completion on August 31, 1958, this contract now 70 per cent completed is ahead of schedule.

Bridges

(1) Jacques-Cartier Bridge : The construction of the Seaway channel along the south shore of the St. Lawrence River in the Lachine Section, directly opposite the City of Montreal, involves extensive modifications to the foundations, superstructure, and southern approaches of the Jacques Cartier Bridge.

The Seaway channel will intersect the bridge structure between piers No. 9 and No. 10 at which point it is necessary to provide 120 feet clearance above high water level to allow ships to pass up and down the channel.

The bridge structure presently has a clearance of approximately 40 feet between the lower chord of the existing deck truss span and high water level.

Replacement of the existing deck truss span by a through-truss span will contribute about 30 feet additional clearance over the channel.

The remaining 50 feet clearance required will be accomplished by jacking the bridge structure and extending the supporting piers vertically upwards in progressive stages without interruption to the flow of traffic over the bridge.

The adjoining bridge spans on each side of the Seaway channel will be raised varying amounts to produce a gradual maximum grade on the traffic lanes of 4.2 per cent.

Temporary Bailey Bridges and temporary access roadways will be installed by the Authority to divert traffic, from the two southern spans



This open cut through hard abrasive sandstone is for a four-lane highway tunnel under the upper end of the Lower Beauharnois Lock, near Melocheville, Que. The lock is being built running at approximately right angles to this tunnel. This tunnel is being built to ensure uninterrupted traffic on highway leading to and from Valleyfield, P.Q.

on the bridge structure and around the existing plaza for a period of about one year, during which time the new roadway system, grade separations, and new plaza and toll booths will be constructed.

The new through-truss bridge span over the channel is to be erected on falsework beside the present span and the operation of replacing the new for the old span will be accomplished with a total interruption to traffic of between 4 and 6 hours.

Two contracts have been awarded for the above-described work :

(a) one contract deals with the enlargement of the Bridge Piers Nos. 1-11 and is valued at \$940,810. It is now 88 per cent completed.

(b) the other contract, valued at \$6,928,720 is scheduled for completion on October 30, 1958.

(2) Victoria Bridge : This bridge is owned and operated by the Canadian National Railways. C.N.R. and Seaway Authority Engineers have found a solution to the problem raised by this bridge. They have agreed upon a plan which involves the use of canal dykes and embankments which will permit uninterrupted vehicular traffic across the Seaway. At the same time, a diversionary bridge for railway purposes will be built by the Canadian National Railways. Uninterrupted highway traffic at the Seaway crossing is being provided for by the simple arrangement of two lift spans, one at Victoria Bridge and the other at the upper end of St. Lambert Lock located just above Victoria Bridge. A contract for the construction of the superstructure for two vertical lift bridges at St. Lambert Lock and valued at \$6,061,640 was awarded in late December 1956.

(3) Honore Mercier Bridge : Because of the increase in the volume of traffic over this bridge completed in 1935 by the Lake St. Louis Bridge Commission, an agency of the government of the Province of Quebec, the St. Lawrence Seaway Authority has decided to elevate the southerly part of the bridge over the ship channel which, at this point, passes through a portion of the South Shore in the Caughnawaga Indian Reserve. The bridge, as modified, will be an overhead bridge with modern and appropriate approaches on the South Shore having 26-foot wide modern divided highways and grade separations. The new approaches will have separate ramps, one for eastern traffic and one for western traffic.

A contract for the construction and maintenance of temporary approaches and demolitions — Honore Mercier Bridge — was awarded during 1956 and the work is progressing satisfactorily. Contracts for the sub-structure and the superstructure of the new overhead portion of the bridge are to be awarded in early 1957. Plans, specifications and drawings are completed and tenders have been called on two of the five contracts to be awarded to cover all the modifications on this bridge.

(4) Canadian Pacific Railways Bridge : A contract amounting to \$3,031,097 was awarded by the end of 1956 for the superstructure of two Vertical Lift Bridges to be installed in the embankment leading to the Canadian Pacific Railways Bridge upstream from Honore Mercier Bridge.

Remedial Works

Because of the construction of the Seaway remedial works are required on the South Shore in the Lachine Section. These remedial works include water supply and sewers for the Municipalities of Longueuil, Montreal



Concrete approach walls, 3400 feet in length, being built at the upper end of the future Iroquois Lock.

South, Jacques-Cartier, St. Lambert and Preville. Contracts for these remedial works include the following :

(a) Construction of a pipeline for water intake for the Municipalities of Longueuil and Jacques-Cartier at a cost of \$535,200. This contract is 97 per cent complete.

(b) Construction of a water intake for the Municipalities of Longueuil and Jacques-Cartier at a cost of \$127,726. This contract is 96 per cent complete.

(c) Construction of a collector sewer and outfalls for the Municipalities of Montreal South, Jacques-Cartier, St. Lambert and Preville at a cost of \$1,845,405. This contract is 37 per cent complete.

Hydraulic Models

At Ville LaSalle near Montreal, the Authority has constructed an Hydraulic Laboratory Building in which two Hydraulic Models were built and on which test operations have started. In early December these two models were officially opened by the Minister of Transport.

These two hydraulic models, one known as the Lachine Rapids Reach Model and the other known as the Montreal Harbour Model are part of the Authority's hydraulic model program. Other models have been constructed at the National Research Council Hydraulic Laboratory at Ottawa. One of these models represents the important sections of the St. Lawrence River from the Barnhart Island Powerhouses to Lake St. Francis. This model has been used for the development of a plan for the improvement of the channels in the Cornwall area and also for the development by the power entities of river improvements below the Barnhart Island Powerhouses that will increase their dependable power output. Another model deals with the reproduction of Seaway locks and has been used in the development of a hydraulic system that will enable a ship to pass through the locks in a minimum of time and with a maximum of security.

The two hydraulic models at Ville LaSalle are for the purpose of conducting studies in the Lachine Section in a manner similar to those made by the Authority in the International Rapids Section. All Seaway features have been carefully represented in these two models, at a scale of 1/200 th of the actual river. Tests are now being carried out at the Ville LaSalle Laboratory.

SOULANGES SECTION

Following the adoption by the Authority of a general scheme for the proposed lock and canal to be constructed at Melocheville to lift ships from Lake St. Louis to the Beauharnois Power Canal already dredged to the required 27-foot depth, contracts were awarded for the excavation and construction of locks.

Excavation and Construction of Locks

(1) Valued at \$3,504,999, a contract was awarded in the late spring for the first stage construction of the Lower and Upper Beauharnois Locks and Approaches. The total estimated cubic yardage to be excavated on this contract was 1,455,000 cubic yards. This contract has been completed.

(2) Upon the completion of the above referred to contract, the contractor started work for the construction of the Lower Beauharnois Lock

and Approach. This lower lock together with the upper lock near the Beauharnois Power Canal will provide an 82-foot lift. This contract includes the construction of the lock and excavation of 120,000 cubic yards of common excavation and 1,600,000 cubic yards of rock excavation. It also includes the construction of a tunnel at the upper end of the Lower Beauharnois Lock to ensure uninterrupted traffic on the highway leading to and from Valleyfield. The tunnel, a four traffic lane construction, is to be completed in the spring of 1957. As of December 31, 1956, common excavation was 72 per cent complete, rock excavation, 16 per cent complete. This contract valued at \$11,246,425, of which 10 per cent had been completed on December 31, 1956, is scheduled for completion on November 30, 1958.

(3) Also scheduled for completion on November 30, 1958, is another contract valued at \$14,440,000, for the construction of Upper Beauharnois Lock and Approaches. This contract includes construction of the lock and excavation of 970,000 cubic yards of common excavation and 1,450,000 cubic yards of rock excavation. To date 13 per cent of the contract value has been completed.

(4) A fourth contract was awarded for the production of 1,100,000 cubic yards of concrete aggregates of different sizes and sand to be used in the fabrication of concrete for the two Lower and Upper Beauharnois Lock structures. The required crushing plant was erected and is now producing the required aggregates.

Bridges

Three bridges exist on the Beauharnois Canal — The Melocheville New York Central Railway Bridge, the St. Louis Railway and Highway Bridge and the Valleyfield Railway and Highway Bridge. As of December 31, 1956, a contract valued at \$6,343,146 had been awarded for the supply and erection of Vertical Lift Bridge Spans at both the St. Louis and Valleyfield Bridges. The contract for the superstructure for the New York Central Swing Bridge at Upper Beauharnois Lock is to be awarded early in the new year.

LAKE ST. FRANCIS SECTION

Dredging

On March 23, 1955, three contracts were awarded for the dredging of the seaway channel at Lake St. Francis. The contract for dredging the western approach to the Beauharnois Canal is valued at \$682,000 and calls for the removal of 1,100,000 cubic yards of sand, silt and clay. A total of 435,000 cubic yards has been removed by the end of the year.

The dredging of 600,000 cubic yards of sand, silt and clay at Lancaster Bar which had been postponed until the spring of 1956 has progressed satisfactorily. This contract is ahead of schedule. The total of dredging material to date is 471,000 cubic yards. The second contract for the dredging of the channel from Fraser Point to Cornwall is valued at \$4,698,000, and involves the removal of 2,700,000 cubic yards of overburden. By the end of 1956, 2,000,000 cubic yards had been dredged.

INTERNATIONAL RAPIDS SECTION

Construction

On February 11, 1955, the Authority awarded a contract for the construction of a canal and lock at Iroquois Point, Ontario. This lock will be the most westerly one to be built on the Seaway. The contract requires the excavation of 4,500,000 cubic yards of material, mostly heavy glacial till running on a distance of some 6,600 feet, and is to be completed by November 30, 1957. As of December 31, 1956, the excavation was mostly completed. The approach walls were more than half completed and the concrete had been placed on a portion of the lock structure. Sixty-five per cent of the total work had been completed.

Dredging

Following the decision by the Canadian Government that the dredging in the north channel would take the form of a navigation channel which would bring deep navigation to Cornwall and would also be useful in the future, a contract was awarded in the late fall, valued at \$3,574,000 and involving the excavation of 290,000 cubic yards of common excavation and 214,000 cubic yards of rock excavation.

Arrangements were also made between the two Seaway entities with respect to the division of the work required to be done in the south channel. In this respect, contracts involving 6,500,000 cubic yards of common and rock excavation will be awarded in early 1957.

Bridges

Following the decision of the New York Central Railroad to abandon its railway services between Roosevelttown, N.Y. and Cornwall, Ont., it became apparent that it would be more economical to build a high-level bridge over the south channel than to relocate the facilities of the New York Central Railroad and the Cornwall International Bridge around a loop at Polleys Gut as originally contemplated.

The St. Lawrence Seaway Authority and the Saint Lawrence Seaway Development Corporation proceeded to revise their plans and agreed upon the construction of a high-level bridge over the south channel, the Seaway Authority to build the sub-structure, and the Seaway Development Corporation to build the superstructure. This plan will result in substantial savings to both entities.

HEADQUARTERS IN CORNWALL

Work on the Headquarters Building at Cornwall is progressing satisfactorily. This building should be ready for occupation early in 1958.

WELLAND SECTION

Construction

Three contracts were awarded for channel excavation in the dry between Locks No. 1 and 2, Locks No. 2 and 3 and Locks No. 3 and 4. These three contracts are valued at \$1,100,000 and involve the excavation of approximately 850,000 cubic yards of material. Two of these contracts,

from Lock 1 to Lock 2 and from Lock 3 to Lock 4 have been completed. The third contract between Lock No. 2 and Lock No. 3, 50 per cent is complete.

Dredging

Two dredging contracts were awarded in the fall of 1956. One valued at \$7,280,575 involves the dredging of 250,000 cubic yards of overburden and 397,500 cubic yards of rock. The second contract valued at \$11,623,200 involves the dredging of 672,000 cubic yards of rock. These two contracts are to be completed on September 30, 1958.

GENERAL

During the year 1956 contracts were awarded for the supply and installation of operating equipment on all locks of the St. Lawrence Seaway. These contracts valued at \$19,500,000 include service bridges at locks of the Seaway and varied material such as stiffleg derricks, stop logs, pick-up booms, sector gates, mitre gates, wire rope fenders, generator standby sets, electrical cubicles, electrical control desks, unwatering and sum pumps, valve operating machines, mooring bollards, electrical motors, limit switches, line haulers and lighting standards.

FINANCE

Seaway construction is financed by loans from the Government of Canada. During the Corporation's fiscal year, January 1st — December 31st, 1956, loans totalling \$41,500,000 were received and there was refunded to the Minister of Finance a temporary advance of \$500,000, which had been received 1st March 1955. The total of loans outstanding at the end of 1956 was \$57,000,000.

After the Seaway is in operation, tolls will be charged to amortize the capital expenditure in accordance with the provision of the statute.

Included in this report is a comparative Balance Sheet of the Authority at 31st December, 1956, certified by the Auditor General of Canada; together with the following supporting schedules :

- (a) Assets acquired or in course of construction
- (b) Construction and Administrative Facilities
- (c) Administrative and Engineering Expenses (deferred — to be distributed on completion of construction)

Ottawa, March 7, 1957.

The Honourable G. C. Marler,
Minister of Transport,
Ottawa.

Sir,

The accounts and financial statement of the St. Lawrence Seaway Authority have been examined for the year ended December 31, 1956. In compliance with the requirements of section 87 of the Financial Administration Act, I now report that, in my opinion :

- (a) proper books of account have been kept by the Authority;
- (b) the financial statement of the Authority
 - (i) was prepared on a basis consistent with that of the preceding year and is in agreement with the books of account. and
 - (ii) the financial statement gives a true and fair view of the state of the Authority's affairs as at the end of the financial year; and
- (c) the transactions of the Authority that have come under my notice have been within the powers of the Authority under the Financial Administration Act and any other Act applicable to the Authority.

Yours faithfully,

WATSON SELLAR
Auditor General.

THE ST. LAWRENCE SEAWAY AUTHORITY
(Established by the St. Lawrence Seaway Authority Act)

Balance Sheet as at December 31, 1956
(with comparative figures as at December 31, 1955)

[illegible]

Certified in accordance with my report dated March 7, 1957 to the Minister of Transport, under section 87 of the Financial Administration Act.

WATSON SELLAR
Auditor General of Canada

Note: Outstanding commitments under uncompleted construction contracts as at December 31, 1956, amounted to approximately \$140,000,000.

THE ST. LAWRENCE SEAWAY AUTHORITY
Assets Acquired or in Course of Construction to December 31, 1956

	<i>Lachine (La Prairie) Section</i>	<i>Soulages Section</i>	<i>Lake St. Francis Section</i>	<i>International Rapids Section</i>	<i>Welland Section</i>	<i>General</i>	<i>Total</i>
Engineering Surveys, etc.							
Preliminary engineering surveys, investigations and design by the Department of Transport (subject to analysis and distribution to section affected) .....	.....	.....	.....	.....	.....	\$1,515,027	\$ 1,515,027
Field charges, including surveys, hydraulic investigations, etc.	\$ 239,684	\$ 79,644	\$ 48,752	\$ 88,082	\$ 39,537	9,614	505,313
Professional services for special surveys and investigations, etc.	224,753	.....	.....	.....	.....	.....	224,753
Hydraulic model building and models	4,435,322	.....	.....	.....	.....	729,908	729,908
Land—Right of Way .....	.....	611	.....	160,356	.....	.....	4,596,289
Seaway Office Building, Cornwall .....	.....	.....	.....	.....	.....	738,430	738,430
Bridges—New construction and alterations to existing structures	2,039,468	22,595	.....	101,092	.....	.....	2,163,155
Channel Excavation and Construction of Dykes	24,787,726	.....	4,170,548	.....	1,152,465	.....	30,110,739
Relocation of Roads, Water Intakes and Sewers	1,752,934	27,959	.....	161	.....	.....	1,781,054
Canal Locks	6,486,542	5,988,990	.....	5,645,898	.....	230,660	18,352,090
	<u>\$39,966,429</u>	<u>\$6,119,799</u>	<u>\$4,219,300</u>	<u>\$5,995,589</u>	<u>\$1,192,002</u>	<u>\$3,223,639</u>	<u>\$60,716,758</u>

Note: The amounts shown in the above Schedule include charges for depreciation on shore and floating equipment to a total of \$57,346.

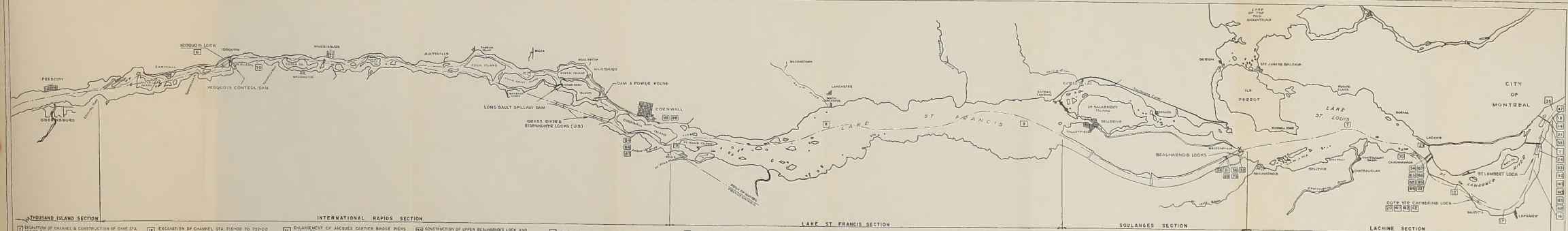
THE ST. LAWRENCE SEAWAY AUTHORITY

Field Buildings, Equipment, etc.,
as at December 31, 1956

	<i>Cost</i>	<i>Depreciation Absorbed</i>	<i>Book Value</i>
Field Buildings—			
Completed	\$ 87,389	\$ 24,757	\$ 62,632
In progress	40,118	—	40,118
Shore Equipment, including field motor vehicles	103,172	33,511	69,661
Floating Equipment	183,248	23,835	159,413
Automobiles	9,688	1,006	8,682
Office Furniture and Equip- ment	235,567	48,021	187,546
	<u>\$659,182</u>	<u>\$131,130</u>	<u>\$528,052</u>

THE ST. LAWRENCE SEAWAY AUTHORITY
Deferred Administrative and Engineering Expenses
as at December 31, 1956

Salaries of Members and executive officers	\$ 236,025
Other salaries and wages	3,289,333
Contribution to Public Service Superannuation Account and Employees' Welfare Plan	202,466
Consultants' and analysts' fees	82,360
Office and travelling expenses	412,030
Office accommodation—rentals and alterations	134,463
Depreciation on office furniture and equipment	48,021
Field buildings and automobiles—operation and maintenance (including depreciation, \$25,763)	201,050
Plan reproduction	76,768
Information services and public relations	42,874
Interest on loans	1,197,157
Miscellaneous	136,703
	<u>\$6,059,250</u>



THE ST. LAWRENCE SEAWAY AUTHORITY

GENERAL PLAN

MONTREAL TO PRESCOTT

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|--|---|--|--|---|---|---|--|
| 1 EXCAVATION OF CHANNEL & CONSTRUCTION OF DYKE STA. 124+00 TO 200+00 | 12 EXCAVATION OF CHANNEL STA. 710+00 TO 752+00 | 21 ENLARGEMENT OF JACQUES CARTIER BRIDGE PIERS NOS. 1 TO 11 | 33 CONSTRUCTION OF UPPER BEAUHARNOIS LOCK AND APPROACHES | 41 FINE AGGREGATES TO ST. LAMBERT LOCK | 55 MODIFICATIONS TO JACQUES CARTIER BRIDGE | 69 PAVING, LIGHTING, ETC. HONORE MERCIER BRIDGE | 84 DREDGING & CHANNEL IMPROVEMENTS, CORNWALL ISL. |
| 2 CONSTRUCTION OF CANAL & LOCK AT IROQUOIS, QNT. | 13 EXCAVATION OF CHANNEL & CONSTRUCTION OF DYKE STA. 752+00 TO 124+00 | 22 EXCAVATION CHANNEL 752+00 TO 900+00, CONSTRUCTION OF DYKE | 34 EXCAVATION OF CHANNEL STA. 900+00 TO 927+00 | 42 FINE AGGREGATES TO COTE STE. CATHERINE LOCK | 56 MODIFICATIONS TO HONORE MERCIER BRIDGE | 70 2 V.L. BRIDGES AT CAUGHYAWAGA | 85 EXCAVATION - SOUTH CHANNEL, CORNWALL ISLAND |
| 3 DREDGING - LAKE ST. LOUIS CHANNEL | 14 EXCAVATION OF CHANNEL & CONSTRUCTION OF DYKE STA. 250+00 TO 450+00 | 23 EXCAVATION OF CHANNEL 930+00 TO 1045+00 & DYKE 930+00 TO LAKE ST. LOUIS | 35 DREDGING - APPROACH AT MONTREAL HARBOUR | 43 UNLOADING OF SAND & TRANSPORTATION TO COTE STE. CATHERINE LOCK AREA | 57 SUBSTRUCTURE - PIERS 14 TO 28, HONORE MERCIER BRIDGE | 75 V.L. BRIDGES AT LOUIS AND VALLEYFIELD | 86 TEMPORARY WATER SUPPLY FOR COURTAULD'S LTD. CORNWALL |
| 4 DREDGING - LAKE ST. FRANCIS, LANCASTER BAR | 15 EXCAVATION OF CHANNEL & CONSTRUCTION OF DYKE STA. 450+00 TO 603+00 | 24 ST. LAMBERT LOCK & APPROACHES | 36 PRODUCTION OF CONCRETE AGGREGATES AT BEAUHARNOIS | 44 UNLOADING OF SAND AND TRANSPORTATION TO ST. LAMBERT LOCK AREA | 58 SUBSTRUCTURE SOUTH OF PIER 28, HONORE MERCIER BRIDGE | 82 2 V.L. BRIDGES AT ST. LAMBERT LOCK | 87 SWING BRIDGE AT UPPER BEAUHARNOIS LTD. |
| 5 DREDGING - LAKE ST. FRANCIS, APPROACH TO BEAUMARNOIS CANAL | 16 EXCAVATION OF CHANNEL & CONSTRUCTION OF DYKE STA. 603+00 TO 603+00 | 25 FIRST STAGE CONSTRUCTION LOWER & UPPER BEAUHARNOIS LOCKS & APPROACHES | 45 COARSE AGGREGATES TO COTE STE. CATHERINE LOCK | 46 PIPELINE FOR WATER INTAKE AT LONGUEUIL AND JACQUES CARTIER | 59 SUPERSTRUCTURE PIERS 14 TO 28, HONORE MERCIER BRIDGE | 83 SUBSTRUCTURE FOR H.L. BRIDGE CORNWALL ISL. | 88 DREDGING - APPROACHES TO IROQUOIS LOCK |
| 6 DREDGING - LAKE ST. FRANCIS, FRASER POINT TO CORNWALL | 17 CONSTRUCTION OF COTE STE. CATHERINE LOCK & APPROACHES | 26 CONSTRUCTION OF LOWER BEAUHARNOIS LOCK AND APPROACHES | 46 COARSE AGGREGATES TO ST. LAMBERT LOCK | 47 COLLECTION SEWER & OUTFALLS AT MONTREAL SOUTH, JACQUES CARTIER, ST. LAMBERT & PREVILLE | 60 SUPERSTRUCTURE SOUTH OF PIER 28, HONORE MERCIER BRIDGE | 84 DREDGING - 16+00 TO 74+00 NORTH CHANNEL | 89 REGULATING WORKS & ROAD UNDERPASS AT ST. LAMBERT LOCK |

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